REMARKS

Applicant has amended claims 1, 6, 7, 12, 14, 15, 19 and 27, cancelled claims 5, 9, 16 and 29 and added new claims 31-40. New claims 31-33 correspond to claims 9, 16 and 29 rewritten in independent format. No new matter has been added.

Objections Based on Claim Informalities

The Examiner objected to claim 9, 16 and 29 as being dependent upon a rejected base claim. Applicant has cancelled claims 9, 16 and 29 and added new claims 31, 32 and 33 that correspond to claims 9, 16 and 29, respectively, rewritten in independent form. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the objection in light of the claims being rewritten in independent form as requested by the Examiner.

The Examiner further objected to claims 11 – 18 as requiring clarification of the phrase "said frame" in claim 11 and "said first frame" in claim 16. Applicant has amended claims 11 and newly filed claim 32, which corresponds to previous claim 16, to overcome this objection. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this objection..

Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1, 7, 10-12, 18-20 and 26 as being anticipated by U.S. Patent No. 4,696,039 issued to Doddington ("the Doddington reference"). Applicant respectfully traverses the rejection.

Independent claims 1, 11 and 19, from which claims 7, 10, 12, 13, 20 and 26 depend, have been amended to recite at least one of (a) decreasing an amplitude of a frame previous to a frame comprising a voiced or unvoiced plosive and (b) increasing an amplitude of a frame comprising an unvoiced plosive. As the Examiner admitted by indicating that claims 9, 16 and 29 contain allowable subject matter, the Doddington reference does not disclose, teach or suggest decreasing an amplitude of a prior frame when a voiced or unvoiced plosive is detected in a frame. In addition, the Doddington reference does not disclose, teach or suggest increasing the

9

amplitude of the frame comprising an unvoiced plosive. The Doddington reference teaches normalizing the initial allophone /s/ of the word "six" with respect to the vowel allophone /i/. The Doddington reference, however, does not disclose, teach or suggest increasing the amplitude of a frame comprising an unvoiced plosive. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1, 7, 10-12, 18-20 and 26 in light of the amendments to claims 1, 11 and 19, and that claims 1, 7, 10-12, 18-20 and 26 be allowed.

The Examiner further rejected claims 1, 5, 6, 8, 19, 20, 22, 27 and 28 as being anticipated by Japanese Patent Application No. 10-124089 of Omori et al. (the "Omori reference"). Applicant respectfully traverses the rejection.

Independent claims 1 and 19, from which claims 5, 6, 8, 20, 22, 27 and 28 depend, have been amended to recite at least one of (a) decreasing an amplitude of a previous frame to a frame comprising a voiced or unvoiced plosive and (b) increasing an amplitude of a frame comprising an unvoiced plosive. As the Examiner admitted by indicating that claims 9, 16 and 29 contain allowable subject matter, the Omori reference does not disclose, teach or suggest decreasing an amplitude of a prior frame when a voiced or unvoiced plosive is detected in a frame. In addition, the Omori reference does not disclose, teach or suggest increasing the amplitude of the frame comprising an unvoiced plosive. Rather, the Omori reference teaches boosting the excitation signal of an LPC remainder from the frame's LPC analysis controlled by the output of the affricate detector when a fricative and an affricate are detected. *See, e.g.,* Abstract. Thus, the Omori reference does not disclose, teach or suggest increasing the amplitude of a frame comprising an unvoiced plosive. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1, 5, 6, 8, 19, 20, 22, 27 and 28 in light of the amendments to claims 1 and 19, and that claims 1, 5, 6, 8, 19, 20, 22, 27 and 28 be allowed.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 2-4, 17, 24, 25 and 30 as being unpatentable over the Doddington reference in view of U.S. Patent No. 4,852,170 issued to Bordeaux (the "Bordeaux reference"). Applicant respectfully traverses the rejection.

Claims 1, 11 and 19, from which claims 2-4, 17, 24, 25 and 30 depend, have been

10

amended to recite at least one of (a) decreasing an amplitude of a frame previous to a frame comprising a voiced or unvoiced plosive and (b) increasing an amplitude of a frame comprising an unvoiced plosive. As the Examiner admitted by indicating that claims 9, 16 and 29 contain allowable subject matter, neither the Doddington reference nor the Bordeaux reference disclose, teach or suggest decreasing an amplitude of a prior frame when a voiced or unvoiced plosive is detected in a frame. In addition, neither the Doddington reference nor the Bordeaux reference disclose, teach or suggest increasing the amplitude of a frame comprising an unvoiced plosive. The Doddington reference teaches normalizing the initial allophone /s/ of the word "six" with respect to the vowel allophone /i/. The Doddington reference, however, does not disclose, teach or suggest increasing the amplitude of a frame comprising an unvoiced plosive. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 2-4, 17, 24, 25 and 30 in light of the amendments to claims 1, 11 and 19, and that claims 2-4, 17, 24, 25 and 30 be allowed.

The Examiner also rejected claims 21-23 as being unpatentable over the Doddington reference in view of Sadaoki Furui, "Digital Speech Processing, Synthesis, and Recognition," Marcel Dekker, Inc. New York, 1989, pp. 70-81, 168-204 and 320-22 (the "Furui reference"). Applicant respectfully traverses the rejection.

Claim 19, from which claims 21-23 depend, have been amended to recite a means for at least one of (a) increasing an amplitude of a frame comprising an unvoiced plosive and (b) decreasing an amplitude of a frame that precedes a frame comprising a voiced or unvoiced plosive. As the Examiner admitted by indicating that claims 9, 16 and 29 contain allowable subject matter, neither the Doddington reference nor the Furui reference disclose, teach or suggest a means for decreasing an amplitude of a frame that precedes a frame comprising a voiced or unvoiced plosive. In addition, neither the Doddington reference nor the Furui reference disclose, teach or suggest increasing the amplitude of the frame comprising an unvoiced plosive. The Doddington reference teaches normalizing the initial allophone /s/ of the word "six" with respect to the vowel allophone /i/. The Doddington reference, however, does not disclose, teach or suggest a means for increasing an amplitude of a frame comprising an unvoiced plosive. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the

11

rejection of claims 21-23 in light of the amendment to claim 19, and that claims 21-23 be allowed.

The Examiner also rejected claims 11, 14 and 15 as being unpatentable over the Omori reference in view of the Doddington reference. Applicant respectfully traverses the rejection.

Claim 11, from which claims 14 and 15 depend, have been amended to recite at least one of (a) decreasing an amplitude of a frame that precedes a frame comprising a voiced or unvoiced plosive and (b) increasing an amplitude of a frame comprising an unvoiced plosive. As the Examiner admitted by indicating that claims 9, 16 and 29 contain allowable subject matter, neither the Omori reference nor the Doddington reference disclose, teach or suggest decreasing an amplitude of a prior frame when a voiced or unvoiced plosive is detected in a frame. In addition, neither the Omori reference nor the Doddington reference disclose, teach or suggest increasing the amplitude of a frame comprising an unvoiced plosive. Rather, the Omori reference teaches boosting the excitation signal of an LPC remainder from the frame's LPC analysis controlled by the output of the affricate detector when a fricative and an affricate are detected. *See, e.g.,* Abstract. Thus, the Omori reference does not disclose, teach or suggest increasing the amplitude of a frame comprising an unvoiced plosive. The Doddington reference teaches normalizing the initial allophone /s/ of the word "six" with respect to the vowel allophone /i/. Thus, the Doddington reference does not disclose, teach or suggest increasing the amplitude of a frame comprising an unvoiced plosive. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 11, 14 and 15 in light of the amendments to claim 11, and that claims 11, 14 and 15 be allowed.

New Claims 34 – 40

Applicant has also provided new claims 34-40. Claim 34, from which claims 35-40 depend, recites analyzing a frame to determine whether the frame comprises a fricative and modifying the frame by boosting an amplitude of the frame when the frame comprises an unvoiced fricative but not boosting the amplitude of the frame when the frame comprises a voiced fricative. No new matter has been added. Support for the amendment may be found throughout the specification. *See, e.g.,* pages 11-12. While the Omori reference discloses

12

boosting an amplitude when a fricative is detected, the Omori reference does not disclose, teach or suggest boosting the amplitude for an unvoiced fricative while not boosting the amplitude when a voiced fricative has been detected. Thus, Applicant believes that new claim 34 is allowable.

CONCLUSION

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

SHERIDAN ROSS P.C.

By:_____

Thomas J. Osborne, Jr.
Registration No. 39,796
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: August 26, 2004 _____

13